

Application of: John E. Johnson
Serial No.: 10/604,306
Amendment B

AMENDMENTS TO THE CLAIMS:

1. (currently amended) An apparatus for removing spinal cord material from a carcass of an animal comprising:
an elongated flexible tube forming a vacuum casing;
a flexible rotatable shaft extending through said tube and captured therein;
and
a cutting bit attached to a tip end of the shaft and extending from the tube
operable for engaging and breaking down a spinal cord material sufficient
for vacuuming,
where said rotatable shaft is adapted to retract the cutting bit back within the
vacuum casing and extend through the vacuum casing extending the
cutting bit forward beyond the vacuum casing.
2. (original) The apparatus for removing spinal cord material as recited in Claim 1
where the cutting bit is an auger style bit.
3. (original) The apparatus for removing spinal cord material as recited in Claim 1
where the cutting bit is a drill style bit.
4. (original) The apparatus for removing spinal cord material as recited in Claim 1
where the elongated flexible tube is in communication with a vacuum source.
5. (original) The apparatus for removing spinal cord material as recited in Claim 1
where the rotatable shaft is operably attached to a rotation drive for effecting rotation of
the shaft and bit.

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6. (currently amended) A method for removing spinal cord material from a carcass of an animal comprising the steps of:
inserting an elongated flexible tube vacuum casing through a spinal channel of a carcass where said tube has a flexible rotatable shaft extending therethrough and a cutting bit attached to a leading tip end of the rotatable shaft;
driving rotation of the rotatable shaft and bit attached thereto with a rotation drive for breaking down a spinal cord material;
retracting in and extending through said vacuum casing the rotatable shaft thereby retracting the bit within the casing and extending the bit beyond the casing for engaging and disengaging the spinal cord extending through the spinal channel;
and
applying a vacuum for extracting spinal cord material with a vacuum source in communication with the elongated flexible tube vacuum casing.
7. (previously presented) The method for removing spinal cord material as recited in Claim 6 further comprising the steps of:
inserting a feed line through the spinal channel of an animal carcass where said feed line has a pull chain attached to a trailing edge of the feed line; and
pulling the feed line and pull chain attached thereto through the spinal channel where said pull chain has linkages of spiral spring cutting head

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implements.

8. (currently amended) The method for removing spinal cord material as recited in Claim 6 further comprising:

inserting an elongated tube vacuum casing through the spinal channel of a carcass where said elongated flexible tube has a flexible high pressure tubing extending there through and a high pressure nozzle in fluid communication with said high-pressure tubing and attached to one end of the high pressure tubing for emitting a high pressure jet spray;

retracting in and extending through said vacuum casing the high pressure tubing thereby retracting the high pressure nozzle within the casing and extending the nozzle beyond the casing for engaging and disengaging a spinal cord in the spinal channel with the high pressure jet spray from the high pressure nozzle;

emitting the high pressure jet spray at a pressure sufficient to break down the spinal cord material for vacuuming out; and

applying a vacuum to the flexible tube vacuum casing for extracting the spinal cord material.

9. (Currently Amended) An apparatus for removing spinal cord material from a carcass of an animal comprising:

a pull chain having linkages of having attached spiral spring cutting head implements, where said spiral spring varies in diameter along its length, thereby

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having differing diameter springed cutting edges; and
a semi-flexible worm feed line attached to an end of the chain for insertion
through the spinal canal and pulling the pull chain through.

10. (original) The apparatus for removing spinal cord material as recited in Claim 9 where the pull chain further having linkages of spiral spring cutting head implements with differing diameter cutting edges.
11. (original) The apparatus recited in Claim 9 further comprising:
 - a line drive for pulling the feed line and chain through the canal; and
 - a sanitization system having high-pressure spray nozzles proximately disposed to the pull chain after it exits the carcass operable to spray sanitizer solution on the pull chain for sanitizing and removing debris.
12. (currently amended) A method for removing spinal cord material from an animal carcass comprising the steps of:
 - inserting a semi-flexible worm feed line through a rear end of the spinal canal of an animal carcass and out through the neck end of the spinal canal where said feed line has a pull chain attached to a trailing edge of the feed line;
 - and
 - pulling the feed line and pull chain attached thereto through the spinal channel where said pull chain has linkages of having attached spiral spring cutting head implements where said spiral spring varies in diameter along its

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length, thereby having differing diameter sprung cutting edges.

13. (original) The method for removing spinal cord material as recited in Claim 12 further comprising the steps of:

sanitizing the pull chain with a sanitizer solution.

14. (currently amended) An apparatus for removing spinal cord material from a carcass of an animal comprising:
an elongated flexible tube forming a vacuum casing; and
a flexible high-pressure tubing extending through said elongated flexible tube and captured therein for channeling and delivering fluid under high pressure to a high pressure nozzle for emitting a jet spray of fluid sufficient to break down a spinal cord material for vacuuming through the elongated flexible tube,

where said flexible high pressure tubing is adapted to retract the high pressure nozzle within the vacuum casing and extend through the vacuum casing extending the high pressure nozzle beyond the vacuum casing for engaging and disengaging the spinal cord with the jet spray.

15. (original) The apparatus for removing spinal cord material as recited in Claim 14 further comprising:

A vacuum source in communication with the elongated flexible tube forming a vacuum.

16. (original) The apparatus as recited in Claim 15 further comprising:

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a high pressure fluid source in fluid communication with said high-pressure tubing.

17. (currently amended) A method for removing spinal cord material from a carcass of an animal comprising the steps of:

inserting an elongated flexible tube vacuum casing through the spinal channel of a carcass where said elongated flexible tube has a flexible high pressure tubing extending there through and a high pressure nozzle in fluid communication with said high-pressure tubing and attached to one end of the high pressure tubing for emitting a high pressure jet spray;

retracting in and extending through said vacuum casing the high pressure tubing,

thereby retracting the high pressure nozzle within the vacuum casing and extending beyond the vacuum casing for engaging and disengaging a spinal cord in the spinal channel with the high pressure jet spray from the high pressure nozzle;

emitting the high pressure jet spray at a pressure sufficient to break down a spinal cord material for vacuuming out; and

applying a vacuum to the flexible tube vacuum casing for extracting the spinal cord material.

18. (currently amended) An apparatus for removing spinal cord material from a carcass of an animal comprising:

an elongated hollow flexible tube forming a vacuum casing open on a leading

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end;

a substantially hollow tubular cutting blade implement having an open leading
blade end, said leading blade end having a sharpened circumferential leading edge
about the opening said cutting blade having a distal open blade base end fixedly
attached to an leading end opening of the leading end of the tubing about and
extending from the rim of the opening of the tubing operable to allow the tube and
blade to rotate together and for engaging and breaking down a spinal cord
material sufficient for vacuuming through said hollow tube.